

Title (en)  
SOLAR CELL AND PHOTOVOLTAIC MODULE

Title (de)  
SOLARZELLE UND PHOTOVOLTAISCHES MODUL

Title (fr)  
CELLULE SOLAIRE ET MODULE PHOTOVOLTAÏQUE

Publication  
**EP 3979336 A1 20220406 (EN)**

Application  
**EP 20208707 A 20201119**

Priority  
CN 202011069475 A 20200930

Abstract (en)  
A solar cell and a photovoltaic module including the solar cell. The solar cell includes: a semiconductor substrate including a first surface and a second surface opposite to each other; a first dielectric layer located on the first surface; a first N+ doped layer located on a surface of the first dielectric layer; a first passivation layer located on a surface of the first N+ doped layer; a first electrode located on a surface of the first passivation layer; a second dielectric layer located on the second surface; a first P+ doped layer located on a surface of the second dielectric layer; a second passivation layer located on a surface of the first P+ doped layer; and a second electrode located on a surface of the second passivation layer. The present disclosure can alleviate a compromise restriction between lateral transmission and light absorption of a polycrystalline silicon film when a passivation contact structure is applied to the front side of the cell, increasing a short-circuit current of the cell while achieving a high open-circuit voltage.

IPC 8 full level  
**H01L 31/0745** (2012.01)

CPC (source: CN EP US)  
**H01L 31/02167** (2013.01 - CN US); **H01L 31/02168** (2013.01 - CN US); **H01L 31/022425** (2013.01 - CN); **H01L 31/02366** (2013.01 - CN); **H01L 31/0682** (2013.01 - US); **H01L 31/0684** (2013.01 - CN); **H01L 31/0745** (2013.01 - EP); **H01L 31/1868** (2013.01 - CN); **Y02E 10/546** (2013.01 - EP); **Y02E 10/547** (2013.01 - EP)

Citation (search report)

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BA ME

DOCDB simple family (publication)  
**EP 3979336 A1 20220406; EP 3979336 B1 20230308**; AU 2020273335 B1 20210909; CN 112201701 A 20210108; CN 112201701 B 20240503; EP 4191687 A1 20230607; JP 2022058069 A 20220411; JP 6975368 B1 20211201; US 11387376 B2 20220712; US 11588065 B2 20230221; US 12015095 B2 20240618; US 2022102568 A1 20220331; US 2022302334 A1 20220922; US 2023155047 A1 20230518

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**EP 20208707 A 20201119**; AU 2020273335 A 20201119; CN 202011069475 A 20200930; EP 22215306 A 20201119; JP 2020192430 A 20201119; US 202017104585 A 20201125; US 202217834409 A 20220607; US 202318098343 A 20230118